

```

A GAT CTG GCC AGC GCC GTG GGC ATC CAG TCC GGC AGC ATC TTT CAT CAC TTC AAG AGC AAG
▶ D L A S A V G I Q S G S I F H H F K S K
GAT GAG ATA TTG CGT GCC GTG ATG CAG GAA ACC ATC CAT TAC AAC ACC GCG ATG ATG CGC
▶ D E I L R A V M E E T I H Y N T A M M R
GCT TCA CTG GAG GAG GCG AGC ACG GTG CCG GAA CCG GTG CTG GCG CTG ATC CCG TGC GAG
▶ A S L E E A S T V R E R V L A L I R C E
TTG CAG TCG ATC ATG GGC GGC AGT GGC GAG GCC ATG GCG GTG CTG GTC TAC GAA TGG CGC
▶ L Q S I M G G S G E A M A V L V Y E W R
TCG CTG TCG GCC GAA GGC CAG GCG CAC GTG CTG GCC CTG CGT GAC GTG TAT GAG CAG ATC T
▶ S L S A E G Q A H V L A L R D V Y E Q I

```

FIGURE 1

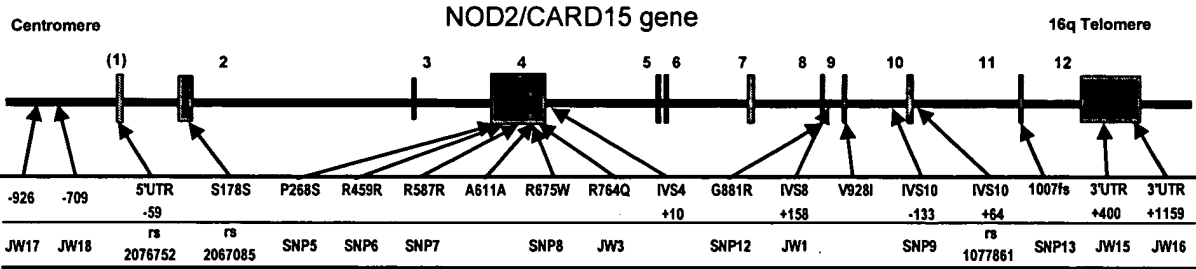


Figure 2A

3/12

R702W

5' ACCCTTCAGAT CACAGGAGCC TTCTTGGGAG GGGTGTGTCT CCGGAGCCAC 50  
 3' TCGAAGTCTA GTGTGGTGGG AAGGACGGTC CCGGACACAG GGGGCTGGTC  
 TCGGCGCTCC TCGGTCAGTC CCGGACATCT CAGAGGCGCC TGGTGGGCTC 100  
 ACCGCGGACG ACGGACATAC GGTGTGTAGA CTCTTGGGGG ACGAGGCTGC  
 GCGCGGTGTG CCGGCGTGGT GTCTGGCGCG CAGGCTGGCC AAGGACTTCC 150  
 GTTCCGACAC GGGGCGACCA CAGACCGCGC GTGGGAGCGG TTGGTGAGG  
 ACTGCTTCCC CCGGCTGCA CCGGGTACG CCGACAGGCT GGTGGCCATG 200  
 TCGGCTAGG CCGGTCAGCT GCGGCTTCC GGTGTGGCA CGTACGGTAC  
 CCGGCTTCA TTCTGGTCTT CCGGAGCGTG TAGGACATCC AGGAGGACCG 250  
 GGGGCAAGT ACAGCGAGTA GGGTGGGAC ATGCTCTACG TTCTCTTGGC  
 GGTGGCTGGC AAGGCTGGAC GTGGGCTGPA TGTGGGAC CTCAGTTGA 300  
 CCGGAGCC TTGGGAGTG CAGGCGACTT ACAACCGCTG CAGTCAACT  
 CATTGTGCG TGTGGGCGCC ACTGAGTGTG GTGGGCTGGC CTTTGTGGTG 350  
 GTAAAGCTC ACGGCGGCG TGAATCAC CAGGCGACG GAAACAGCC  
 CAGGAGCTCC GGGGCGCGGT GGGGCTGAG GTGGACTACA ACTGTGTGG 400  
 GTGGTGGAG GGGGCGGCA CCGGAGCTC CAGTGTGT TCGACAGCC  
 TCACTTGGC GTGGAGTCC TGTGGCTTTC CATTGGTGTG TCGAGGCTC 450  
 ACTGTAAGC CAGTGTGTG ACGAGGAC GCAAGCACG ACGTGGGAC  
 TGTGCTACT GTTGTGGC ATGGCTGTTC AGGTATGGG CAGC 3' SEQ ID NO:3 494  
 AATGACTCA CAGTACCG TACGACAG TCGATACCC CTCG 5' SEQ ID NO:4

FIGURE 2B

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G908R

5' ATCAAAACCC TGACAGGACA AGGCACATTT CCAAGTCACC CAGAAAGACT 50  
 3' TAGTTTIGGG ACTCTCTGT TCCCTGTAAA GGTTCAGTGG GTCCTTCTGA  
  
 CGAGTGTCTT CTCTTGAAT CCAATGGTCT TTTTTCCTTA CTCCATGCCC 100  
 GCTCACAGGA GAGAACTTTA GGTACCAGA AAAAAGGAAT GAGGTAACGG  
  
 TAACATTGTG GGGTAGAAAT AAAGTTCAAA GACCTTCAGA ACTGGCCCCA 150  
 ATTGTAACAC CCCATCTTIA TTTCAGTTT CTGGAAGTCT TGACCGGGGT  
  
 GCTCCTCCCT CTTCACCTGA TCTCCCCAAG AAAACTGCAG GATAGACTCT 200  
 CGAGGAGGGA GAAGTGGACT AGAGGGGTTC TTTTGACGTC CTATCTGAGA  
  
 GAAGCTTACC TGACCCACCT CAAGCTCTGG TGATCACCCA AGGCTTCAGC 250  
 CTTCGAATGG ACTCGGTGGA GTTCGAGACC ACTAGTGGGT TCCGAAGTGG  
  
 CAGGGCCTGG GCCCCCTCGT CACCCA ctct gttgccccag aaTCTGAAAA 300  
 GTCCCCGACC CCGGGGAGCA GTGGGTgaga caacgggggtc ttAGACTTTT  
  
 GGCCAAAAGA GTCAACAGAC AGTGTTCAGTG AGTACCTGAT ATGTGTTCTA 350  
 CCGGTTTTCT CAGTTGCTTG TCACAGTCAC TCATGGACTA TACACAAGAT  
  
 GACATGAACT AACAGTCTTC CTCCCCTGTC AGTCCCAGCC AGAGCGGCAG 400  
 CTGTACTTGA TTGTACAGAG CAGGCAGACG TCAGGGTCCG TCTCCCCGTC  
  
 GACCACTCAA TCCCAGAGTG GCTCAGTGG GGCTCCTGGT CCCAGCAAAG 450  
 CTGGTGAGTT AGGGTCTCAC CCGAGTGACC CCGAGGACCA GGGTCTGTTT  
  
 TGGACCTGCC TCCATCTTTT GGGTGGGATG GCCAAACTTA ACCCAACAGT 500  
 AACTGGACGG AGGTACAAA CCCACCCTAC CCGTTTGAAT TGGETTCTCA  
  
 TTTCAGTGGC TTTCATTAC AGACTTACAG AATAGTACAG 3'-SEQ ID NO5 540  
 AAAGTCACCG AAATGTAATG TCTGAATCTC TTATCATCTC 5'-SEQ ID NO6

FIGURE 2C

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1007fs

5' TTTTAAAAATG AAATCATTGC TCCCTACTTA AAGAGGTAAA CACTTCTTTC 50  
 3' AAATTTTITAC TTTAGTAACG ACCGATGAAT TTCTCCATTT CTGAAGAAAG  
  
 TTACACAGAG AATCAGATCC TTCACATGCA CAATCATTCT CACTGAATGT 100  
 AATCTGTCTC TTAGTCTAGG AAGTGTACGT CTTAGTAAGA GTCACTTACA  
  
 CAGAATCAGA ACCGATCCTC AAAATTCTGC CATTCCTCTC TCCCGTCACC 150  
 GTCTTAGTCT TCCCTAGGAG TTTTAAGAAG GTAAGGACAG AGGGCAGTGC  
  
 CCATTTTACA CATAGAAAAA CTCAGGTTTC GAGAGCTAAA ACACGCCTGC 200  
 GGTAAAAATG CTATCTTTTT CACTCCAAGC CTCCTGATTT TGTCGGGACG  
  
 CCAGGGCCCT TACCAGACTT CCAGGATGGT GTCATTCCTT tcaagggggcc 250  
 GGTCCTCCGA ATGGTCTCAA GGTCCTACCA CAGTAAggaa agttccccgg  
  
 tgcAGGAGGG CTTCTGCCCC TAGGTAGGTG ATGCAGTTAT TGGACAACCT 300  
 agtTCCTCCC GAAGACGGGG ATCCATOCAC TAGGTCAATA ACCTGTTGGA  
  
 GGAAAAGAAG ATACAATGGT GAGCTTCAAG GATTCTTGGT TTTCCTCTTG 350  
 CCTTTTCTTC TATGTTACCA CTCGAAGTTC CTAAGAACCA AAAGGACAAC  
  
 AAACGTGCCA GTTAAAGAGA CTGCAGGAGT TAGCCAGTCT ACTGAAGCCC 400  
 TTTCACAGGT CAATTCTCTT CACGTCTCA ATCGGTCAGA TGACTTCCGG  
  
 ACCGTGCCCC TAGACACATC CTGCTCATGT CTCGATTCC CAATGACCTC 450  
 TGGACAGGGA ATCTGTGTAG CACGAGTACA GACTCTAAGG GTTACTCCAG  
  
 ATCAACAAAG GCTCAGTACC ATCAGTCAA TGTAACCGTC TCCTTTCCAT 500  
 TAGTGTCTTC CCAGTCATGG TAGTCACTTT ACATTGGCAG AGACAAGCTA  
  
 TCACATCATG AGTTTATCAA ATTAAGTACC CACTCCCTTA G3'-SEQ ID NO 7 541  
 AGTCATCTAC TCAATAGTT TAATTCATCG GTGAGCGAAT C5'-SEQ ID NO 8

FIGURE 2D

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atgaaagtta aagtactgtc cctcctggtc ccagctctgc tggtagcagg
cgcagcaaac gctgctgaag tttacaacaa agacggcaac aaattagatc
tgtacggtaa agtagacggc ctgcactatt tctctgacaa caaagatgta
gatggcgacc agacctacat gcgtcttggc ttcaaagggtg aaactcaggt
tactgaccag ctgaccgggtt acggccagtg ggaatatcag atccaggggca
acagcgctga aaacgaaaac aactcctgga cccgtgtggc attcgcaggt
ctgaaattcc aggatgtggg ttctttcgac tacggtcgta actacggcgt
tgtttatgac gtaacttcct ggaccgacgt actgccagaa ttcggtggtg
acacctacgg ttctgacaac ttcattgcagc agcgtggtaa cggcttcgcg
acctaccgta acactgactt cttcgggtctg gttgaaggcc tgaactttgc
tgttcagtac cagggtaaaa acggcaaccc atctgggtgaa ggctttacta
gtggcgtaac taacaacggg cgtgacgcac tgcgtcaaaa cggcgacggc
gtcggcggtt ctatcactta tgattaogaa ggtttcggta tcggtggtgc
gatctccagc tccaaacgta ctgatgctca gaacaccgct gcttacatcg
gtaacggcga ccgtgctgaa acctacactg gtggtctgaa atacgacgct
aacaacatct acctggctgc tcagtacacc cagacctaca acgcaactcg
cgtaggttcc ctggggttggg cgaacaaagc acagaacttc gaagctggtg
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tctaaaggta aaaacctggg tcgtggctac gacgacgaag atatcctgaa
atatgttgat gttggtgcta cctactactt caacaaaaac atgtccacct
acgttgacta caaaatcaac ctgctggacg acaaccagtt cactcgtgac
gctggcatca acactgataa catcgtagct ctgggtctgg tttaccagtt c SEQ
ID NO: 9
```

FIGURE 3A

MKVKVLSLLVPALLVAGAANA AEVYNKDG NKLDLYGKVDGLHYFSDNKDVDGDQTY  
MRLGFKGETQVTDQLTGYGQWEYQIQGNSAENENNSWTRVAFAGLKFQDVG SFDYGR  
NYGVVYDVTSWTDVLPEFGGDTYGSDNFMQQRGN GFATYRNTDFFGLVDGLNFAVQY  
QGKNGNPSGEGFTSGVTNNGRDALRQNGDGVGGSITYDYEGFGIGGAISSSKRTDAQNT  
AAYIGNGDRAETYTGGLKYDANNIYLAAQYTQTYNATRVGSLGWANKAQNFEAVAQY  
QFDFGLRPSLAYLQSKGKNLGRGYDDEDILKYVDVGATYYFNKNMSTYVDYKINLLDD  
NQFTRDAGINTDNIVALGLVYQF

SEQ ID NO: 10

FIGURE 3B

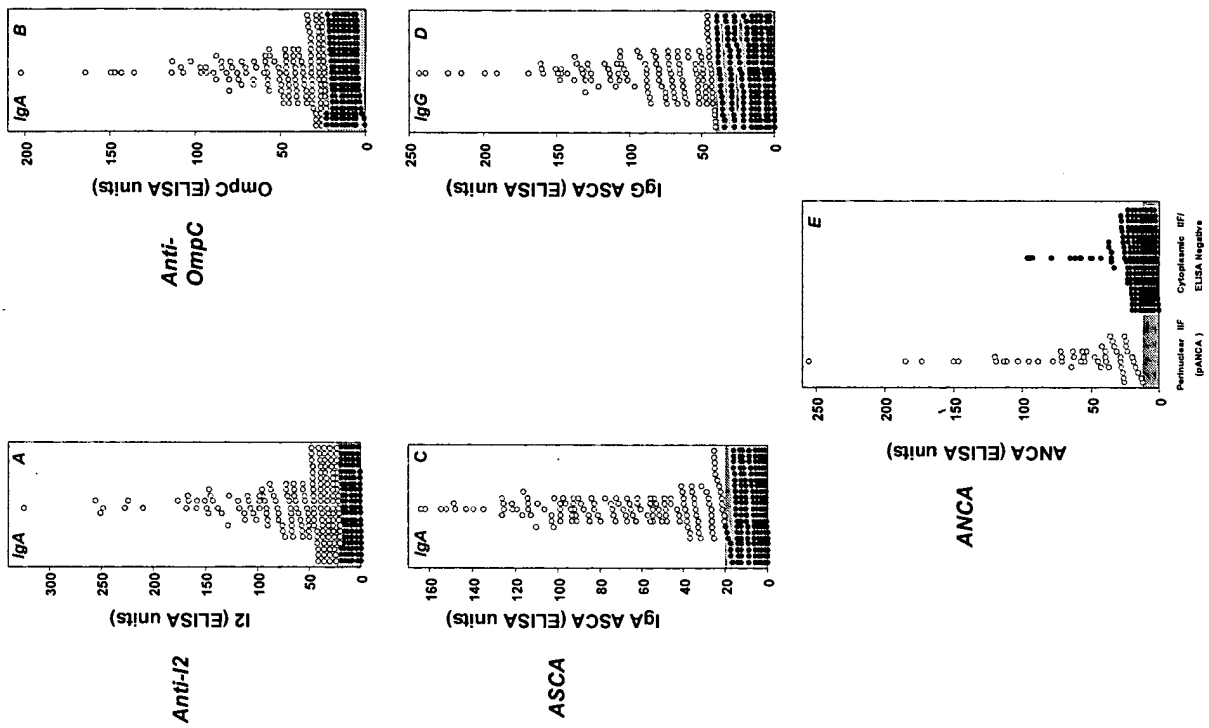
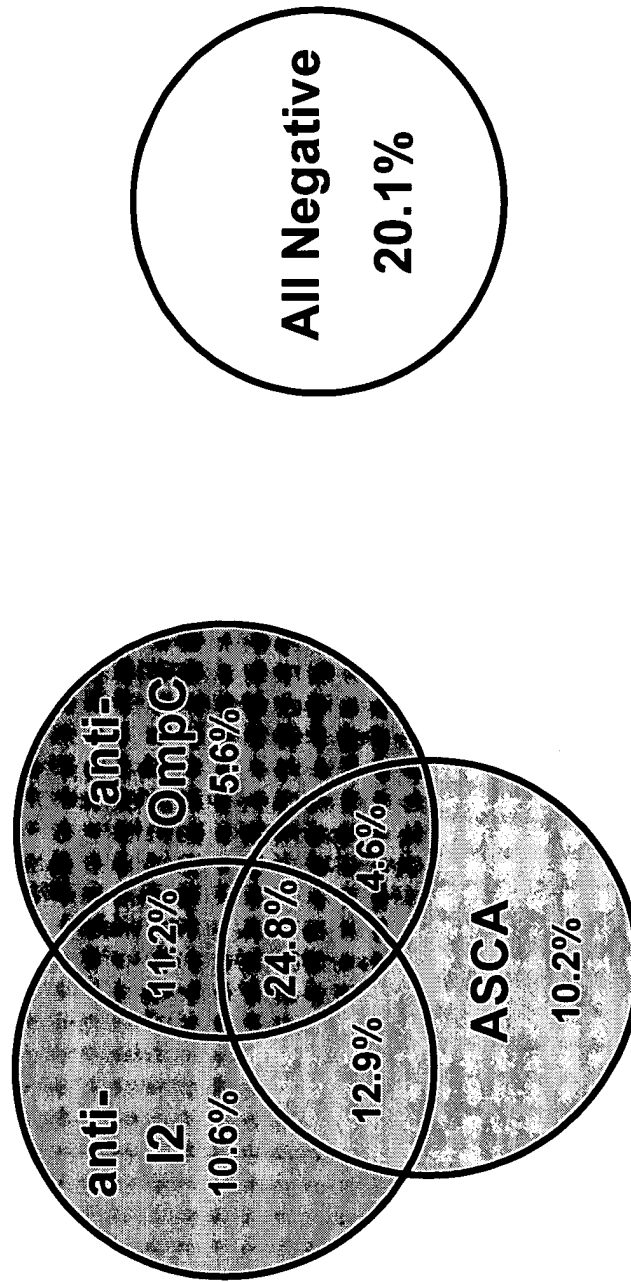


FIGURE 4





**All Negative**

**20.1%**

FIGURE 5

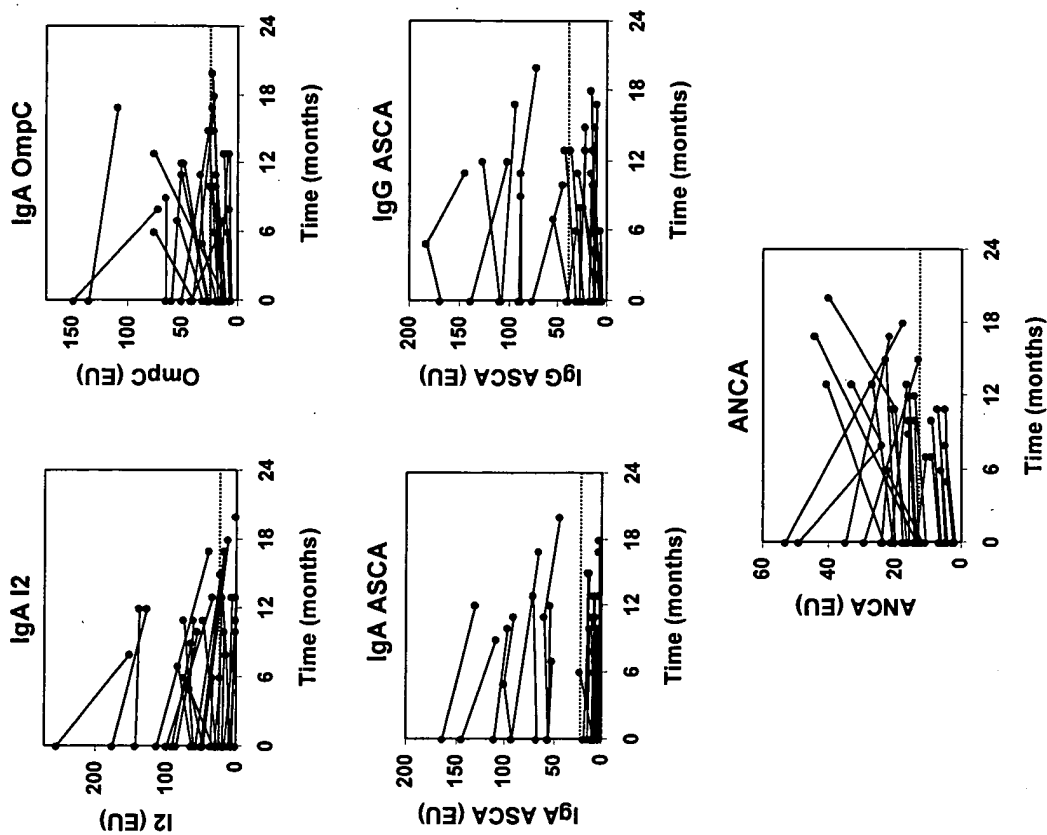


FIGURE 6

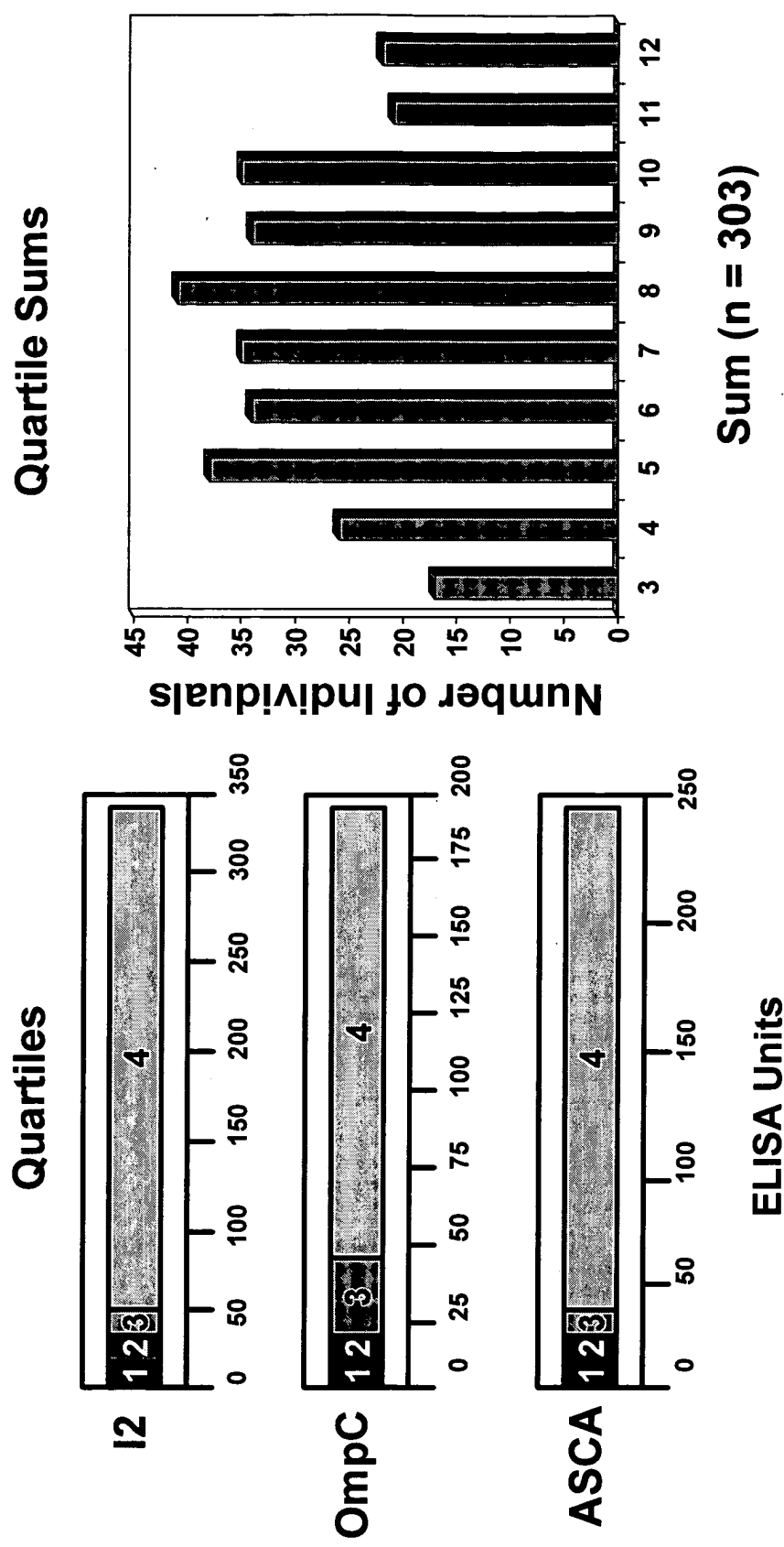


FIGURE 7

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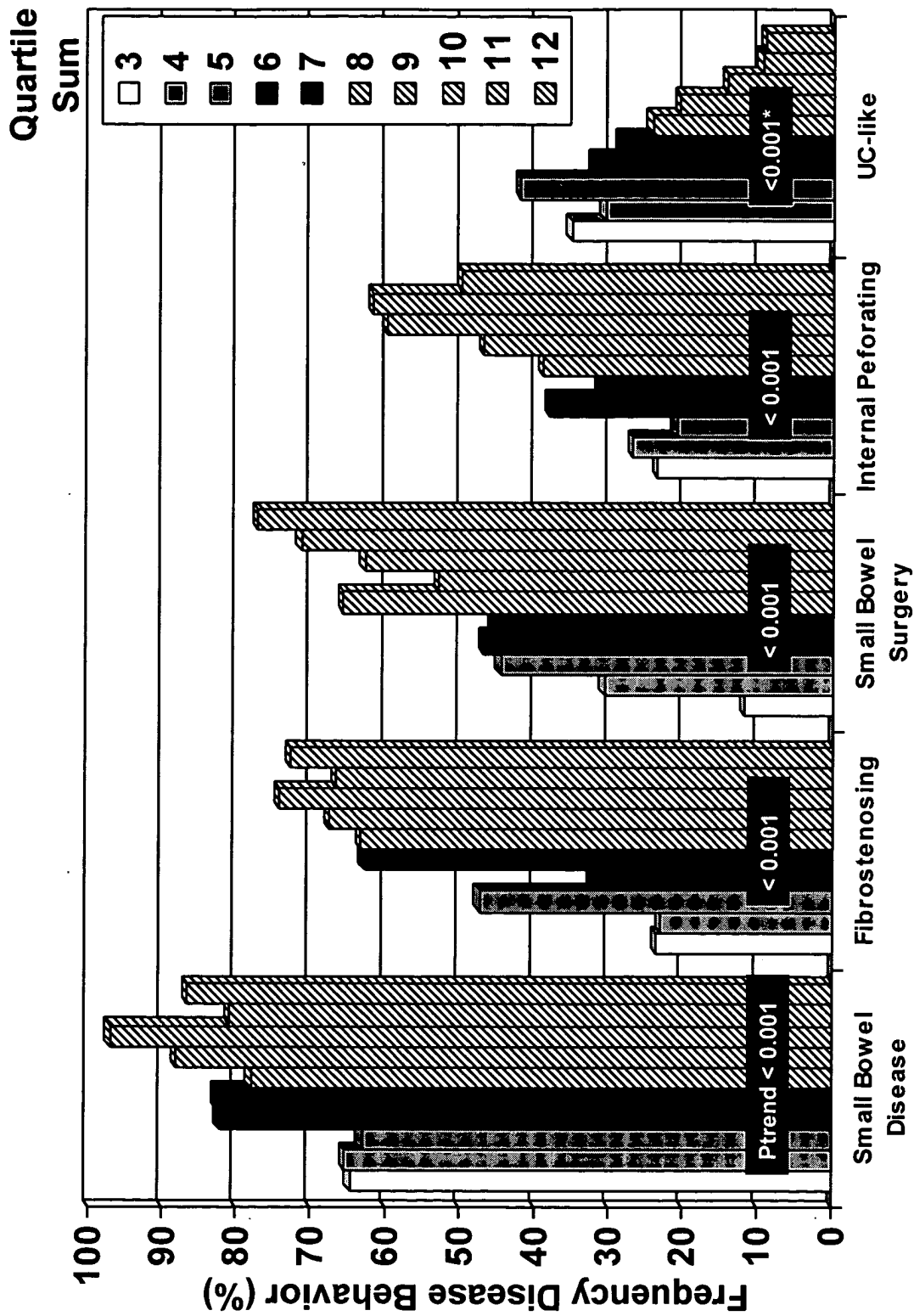


FIGURE 8

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